Amendments to the Specification

Please replace the paragraph spanning page 27, line 16 to page 28, line 5 with the following amended paragraph.

Construction of the nonJ and nonK mutant expression cassettes pBS2020 and pBS2021. The NonK Cys161Gly and NonJ Cys169Gly mutants were generated by site-directed mutagenesis with the following pairs of primers 5'-CGGTGAGCTGCGCGGCGCCTCCTCCTCGGTGC-3'(SEQ ID NO: 8)/ 3'-GCCACTCGACGCCGCCGCGGAGGAGGAGCCACG-5' (SEQ ID NO: 9) (for *nonK*) and 5'-GCGTGGCGGGCTCCGGCAATGTGGCGCTGCGG-3' (SEQ ID NO: 10)/ 3'-p-5' (SEQ ID NO:11) (for *nonJ*) (the Gly codons are underlined), respectively, using the QuickChange kit from Stratagene (La Jolla, CA) according to the manufacture's instruction. The resultant *nonJK* mutants were cloned into pSET152 to yield pBS2020 and pBS2021, in which *nonJK* expression is under the control of the *actI* promoter. pBS2020 or pBS2021 was co-transformed with pBS2018 into *S. lividans*, and the resultant *S. lividans* recombinant strains were tested for biotransformation of (±)-3 into 1 as described above.

Please replace the paragraph on page 28, lines 6-15 with the following amended paragraph.

Expression of nonL and characterization of NonL as a CoA ligase. The *nonL* gene was amplified from pBS2013 by PCR with forward primer of 5'-CGCCGGGGAGACCATATGATCGACGATGTGCTC-3' (SEQ ID NO:12) (the *Nde*I site is underlined) and reverse primer of 3'-GCATACTTGGTCCTTCTTAAGGCCCGCCCGGTC-5'

(SEQ ID NO:13) (the *Eco*RI site is underlined) and cloned as a 1.7-kb *Nde*I-*Eco*RI fragment into the same sites of pET28a (Novagen, Madison, WI) to yield pBS2023. The expression of *nonL* in *E. coli* BL-21 (DE-3) (pBS2023) and purification of the resulting NonL protein by affinity chromatography on Ni-NTA resin were carried out under the standard conditions recommended by Novagen (Fig. 10). The incubation temperature was lowered to 15°C to improve the solubility.

Please replace the paragraph spanning page 44, line 21 to page 45, line 12 with the following amended paragraph.

Plasmid preparation: The relevant nonKJ sequences were amplified from pBS2019 by Vent polymerase (NEB, Beverly, MA) with forward primer 5'-TGGACGCGGGGGCCATATGAGCAAGAG-3' (SEQ ID NO:14) (the NdeI site is underlined) for VSKEH-NonK or 5'-CGCGCTGGTCACCCATATGGGGTTCTGC-3' (SEQ ID NO:15) (the NdeI site is underlined) for MGFCL-NonK and reverse primer of 5'-GCCGCGTCGCCATGCATTGAACGTGGGT-3' (SEQ ID NO:16) (the NsiI site is underlined) and cloned as a 2.7-kb or 2.6-kb NdeI-NsiI fragment into the same of pGEM-5zf (Promega, Madison, WI) generating pBS2041 and pBS2042. The nonLS was subcloned from pBS2003 as a 4.2-kb KpnI-HincII fragment into the sames of pUC18. From the resulting plasmid, the insert was rescued as EcoRI-HindIII fragment and subcloned into the sames of Lithmus 28 generating pHJK-3-45D. The inserts of pBS2041 and pBS2042 were rescued as SpeI-NsiI fragment and subcloned into sames of pHJK-3-45D to generate pBS2043 and pBS2044, respectively. The insert of pBS2044 was rescued as NdeI-BglII fragment and ligated into NdeI-BamHI sites of pIJ4123 to generate pBS2045.

Please replace the paragraph spanning page 45, line 22 to page 46, line 9 with the following amended paragraph.

The *nonK* sequence was amplified from pBS2019 by Vent polymerase with forward primer of 5'-CCTCAGGCCCATGGTCTAGAGCACCATCCTGCGGCGCCTG-3' (SEQ ID NO:17) (the *Nco*I and *Xba*I sites are underlined) and reverse primer of 5'-GCAGAGGCAGATCTGCAGACATCGCCACCTCCCA-3' (SEQ ID NO:18) (the *Bgl*II site is underlined). The *nonJ* was amplified from pBS2019 by Vent polymerase with forward primer of 5'-GACCCCGTCCATGGTCTAGACATTCGACCCGGTCCCCGGC-3' (SEQ ID NO:19) (the *Nco*I and *Xba*I sites are underlined) and reverse primer of 5'-GTGAACGTAGATCTTGGCAAGTCGCCGCCTTCGT-3' (SEQ ID NO:20) (the *Bgl*II site is underlined). The PCR products were purified as *Nco*I-*Bgl*II fragment and subcloned into the sames of pQE60 generating pBS2050 (pHJK-4-16C) (*nonK*) and pBS2051 (pHJK-4-16D) (*nonJ*).